

nication channel belongs to another base station in the same service area or a base station in another service area according to the movement of the mobile station and continues the communication;

said method comprising the steps of:

assigning to each of the radio zones in a service area a number of radio channels corresponding to the traffic volume of each radio zone in a predetermined order, said number of radio channels having different frequencies from one another, so that radio channels first assigned to all of the radio zones constitute a radio channel having a frequency common to all of the radio zones;

assigning to radio zones adjacent to each radio zone a radio channel or channels as a hand-off-only radio channel or channels having been assigned to said each radio zone and having not been assigned to said adjacent radio zones;

assigning to radio channels having the same frequency a plurality of spectrum spreading codes, said spectrum spreading codes being different from one another for each radio zone;

providing a mobile station with at least two correlators; and, when the mobile station hands off a radio channel over which the mobile station is currently communicating by using one of said at least two correlators, causing the mobile station to perform the following steps:

scanning, while continuing the communication using said one correlator, the spectrum spreading codes in each radio zone and measuring received signal levels thereof using the other correlator, and determining the radio zone having the highest received signal level among the measured received signal levels to be a destination radio zone;

informing the base station through which the mobile station is currently communicating of the determined destination radio zone to request a channel switching;

setting a communication channel specified by the base station through which the mobile station is currently communicating in response to the channel switching request and continuing the communication through a base station in the destination radio zone; and

switching the communication channel over which the mobile station is communicating after the hand-off, when it is the hand-off-only radio channel, to a non-hand-off-only radio channel in the same radio zone.

3. The method of claim 1, wherein said base station of said each radio zone is always transmitting via said control channel information corresponding to a spectrum spreading code for said control channel and spectrum spreading codes for control channels of adjacent radio zones and said step of said mobile station scanning said spectrum spreading codes

includes a step wherein said spectrum spreading codes for control channels of said adjoining radio zones, received from said base station are sequentially set in said other correlator for measuring received signal levels.

4. The method of claim 2, wherein said radio channels of the same frequency are each assigned spectrum spreading codes for zone determination which differ from one another for the respective radio zones; said base station of said each radio zone is always transmitting a broadcasting channel using said spectrum spreading codes for zone determination; and said step of scanning said spectrum spreading codes for measuring said received signal levels is a step of scanning said spectrum spreading codes for said broadcasting channel to measure received signal levels.

5. The method of claim 2, wherein a base station of the radio zone of the maximum received signal level preferentially selects an idle communication channel of the same radio channel as that currently used by said mobile station and indicates thereto via the current base station said selected idle communication channel as the channel to be used.

6. The method of claim 1 or 2, wherein the band of said each radio channel is a band wide enough to permit processing the lowest traffic of said radio zones.

7. A mobile station for use in the hand-off method of claim 1 or claim 2, comprising:

an RF transmitting/receiving part which converts a radio channel of a desired frequency to an intermediate-frequency signal and converts a signal to be transmitted to a radio channel of a desired frequency for transmission;

said at least two correlators each being supplied with said intermediate-frequency signal from said RF transmitting/receiving part, and being operative to despread said intermediate-frequency signal by a spectrum spreading code set therein and output the result;

modem means which demodulates said despread output from one of said at least two correlators and modulates a signal to be transmitted;

a spectrum spreader which spectrum spreads said modulated signal to be transmitted and provides it to said RF transmitting/receiving part;

level measuring means for measuring the output level of at least the other correlator; and

a controller which sets a desired spectrum spreading code in each of said at least two correlators and said spectrum spreader, sets the frequency of a radio channel to be selected in said RF transmitting/receiving part and determines the nearest radio zone on the basis of the output from said level measuring means.

8. The mobile station of claim 7, wherein the output of said one correlator is connected to said level measuring means so that it is allowed to measure the received signal level based on said spectrum spreading code set therein.

* * * * *